

No.

7100023



# THE UNITED STATES OF AMERICA

**TO ALL TO WHOM THESE PRESENTS SHALL COME:**

**DeKalb AgResearch, Inc.**

**Whereas, THERE HAS BEEN PRESENTED TO THE  
Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *seventeen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS AND BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

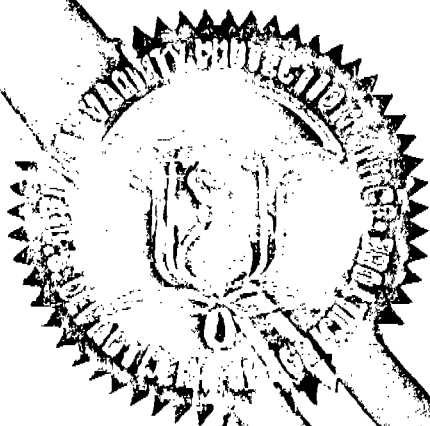
'Bonanza'

*In Testimony Whereof, I have hereunto set  
my hand and caused the seal of the Plant  
Variety Protection Office to be affixed  
at the City of Washington, D.C.  
this 19th day of March in  
the year of our Lord one thousand nine  
hundred and seventy-four*

*Attest*

*L. J. Gollin*  
Commissioner  
Plant Variety Protection Office  
Grain Division  
Agricultural Marketing Service

*Earl L. Butz*  
Secretary of Agriculture



APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

1. VARIETY NAME OR TEMPORARY DESIGNATION  BONANZA	2. KIND NAME  WHEAT	FOR OFFICIAL USE ONLY PV NUMBER <b>7123</b>	
3. GENUS AND SPECIES NAME  Triticum aestivum	4. FAMILY NAME (Botanical)  GRAMINEAE	FILING DATE <b>2/2/71</b>	TIME <b>1:00</b> P.M.
6. NAME OF APPLICANT(S)  DEKALB AgResearch, Inc.	5. DATE OF DETERMINATION	FEE RECEIVED \$ <b>250</b>	BALANCE DUE \$ <b>—</b>
		\$ <b>250</b>	\$ <b>—</b>
		\$ <b>250</b>	\$ <b>—</b>
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.)  Corporation	7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)  Sycamore Road, DeKalb, IL 60115	10. STATE OF INCORPORATION  Delaware	8. TELEPHONE AREA CODE AND NUMBER  815/758-3461
			11. DATE OF INCORPORATION  March 24, 1938
			12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:

13. CHECK BOX BE LOW FOR EACH ATTACHMENT SUBMITTED:

- ☐ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☐ 13B. Exhibit B, Botanical Description of the Variety
- ☐ 13C. Exhibit C, Objective Description of the Variety
- ☐ 13D. Exhibit D, Data Indicative of Novelty
- ☐ 13E. Exhibit E, Statement of the Basis of Applicant's Ownership

14A. Does the applicant(s) specify that seed of this variety be sold by variety name only as a class of certified seed? (See Section 83(a). (If "Yes," answer 14B and 14C below.) ☐ YES ☐ NO

14B. Does the applicant(s) specify that this variety be limited as to number of generations? ☐ YES ☐ NO

14C. If "Yes," to 14B, how many generations of production beyond breeder seed? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

The applicant declares that a viable sample of basic seed of this variety will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable.

The undersigned applicant(s) of this sexually-reproduced novel plant variety believes that the variety is distinct, uniform, and stable as required in Section 41 and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant is informed that false representation herein can jeopardize protection and result in penalties.

11-5-1973

(DATE)

(DATE)

De Kalb AgRes, Inc.

(SIGNATURE OF APPLICANT)

by R J Holland, Vice Pres, AgResearch

(SIGNATURE OF APPLICANT)

Pedigree: **Pitic 62-Chris** x Sonora 64

Bonanza **is** an advanced generation, pure-line selection. Pedigree selection system of development was used following the cross between a semin-dwarf x standard height variety. The selection was introduced into the **DEKALB** Research Program from the International Corn and Wheat Improvement Center as **F<sub>4</sub>** seed in 1466. Subsequently, it was grown and selected two generations a year at Fargo, North **Dakota, and** Ciudad Obregon, Mexico.

Bonanza was multiplied from single rows grown at Ciudad Obregon, in the winter and spring of 1969, and subsequently in a larger block at Casselton, North Dakota in the summer of 1969.

The variety was released and delivered to farmers for Spring, 1970 planting in U.S. Hard Red Spring area.

No characteristic variants were noted during multiplication.

## EXHIBIT B

Plant - spring habit, midseason, semi-dwarf. Stem - white, very strong, hollow. Spike - awned, oblong, mid-dense, erect. Glume - glabrous, white, mid-long, mid-wide, shoulders narrow, oblique to rounded, beaks narrow, acuminate 6 to 11 mm. long. Awns white, 3 to 5 cm. long. Kernels red, short, hard, ovate, germ mid-sized, crease narrow, mid-deep, cheeks rounded, brush large mid-long.

High resistance to leaf rust races in northern area, high adult plant resistance to prevalent northern races of stem rust; and seedling and adult plant resistance to the prevalent southern races of stem and stripe rust. Susceptible to Septoria and Pyrenophora leaf spot fungi.

The mature plant of Bonanza is semi-dwarf in stature and tillers heavily. It heads two days earlier than Chris and one day later than Waldron. It is more resistant to leaf rust than Chris and the same as Waldron. Resistance to stem rust is the same as Chris and Waldron. Average height in 1969 at five locations was 26 inches compared to 35 inches for Chris and 36 inches for Waldron. Resistance to lodging is superior to both Chris and Waldron, and Bonanza is more resistant to shattering than either of these varieties.

DeKalb AgResearch, Inc.  
Sycamore Road  
DeKalb, Illinois 60115

\* Footnotes

- \*No. 6. Not tested against cedar fan.
- \*No. 11. Shape 4 (other) = oblong U.S.D.A. Technical Bulletin 1278.
- \*No. 17. Unable to describe by these references: Crease - narrow  
med - deep (Ref. U.S.D.A Technical Bulletin 1278).
- \*No. 18. Resistance tested under field conditions - races were identified  
as being present in the field.
- \*No. 16. Phenol reaction color is Brown-Black.

BONANZA WHEAT

(Application No. 7123)

Addendum to Exhibit D

Data Indicative of Novelty.

Novelty is based on the unique combination of the characters stated in Exhibit C and the following:

Bonanza most closely resembles Bounty 208 except it has  
1) glumes with shoulders which are oblique to rounded, 2) glume  
beaks which are 6 to 11 mm long, and 3) kernals with a narrow-  
mid-deep crease.<sup>1/</sup>

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<sup>1/</sup> Registration of Bonanza Wheat (No. 496) 1972 Crop Science, 12:129.

Registration of Bounty 208 Wheat (No. 525) 1973 Crop Science,  
13:495-496.

EXHIBIT E

DEKALB AgResearch, Inc. is the employer of the wheat breeders that developed Bonanza. The variety was selected and tested by DEKALB employees at several locations.

A viable sample of basic seed will be deposited upon request and replenished periodically in accordance with regulations.

ASSIGNMENT

KNOW ALL MEN BY THESE PRESENTS, that Hybrid Wheat, Inc., a Delaware corporation ("Grantor"), for good and valuable consideration, the receipt, adequacy and sufficiency of which are hereby acknowledged, does hereby sell, convey, assign, transfer and deliver to Monsanto Flavor/Essence, Inc. ("MFE"), a Delaware corporation, its successors and assigns, all of the rights, obligations, privileges and benefits which Grantor has or may have under the Plant Variety Protection Act in connection with wheat and agrotricum, including, without limitation, the rights, obligations, privileges and benefits evidenced by those Certificates of Plant Variety Protection attached hereto, the particulars of which are as follows:

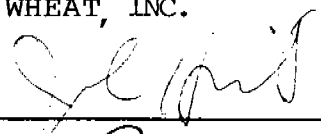
<u>PRODUCT</u>	<u>VARIETY NAME</u>	<u>CERT. NO.</u>	<u>DATE FILED</u>	<u>DATE GRANTED</u>
Wheat	Bonanza	7100023	02-02-71	03-19-74
Agrotricum	290M	7200028	08-30-71	03-05-76
Wheat (hard red winter)	R36	7300050	01-29-73	02-26-74
Wheat	DEKALB 582M	7400045	12-17-73	10-17-75
Wheat	DEKALB 581M	7400044	12-17-73	11-24-75
Wheat	R158	7600068	04-28-76	03-18-77

Included in this Assignment are all of Grantor's rights of recovery and enforcement against any past infringers.

Grantor represents and warrants that the foregoing rights, privileges and benefits are free and clear of any and all liens, mortgages, pledges, charges, security interests or other encumbrances, or any claims or rights of or suits by or obligations to any other person or entity.

Dated this 15th day of March, 1982.

GRANTOR: HYBRID WHEAT, INC.

By: 

Its: VICE PRESIDENT

ATTEST:



Secretary





STATE OF ILLINOIS )  
 ) ss.  
COUNTY OF DEKALB )

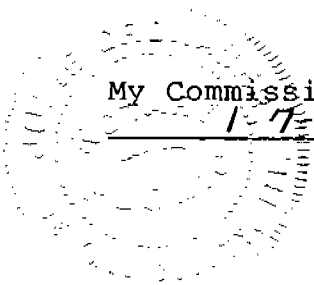
On the 15th day of March, 1982, before me JULIE  
CRONAUER, a Notary Public in and for said County,  
personally appeared John H. Witmer, Jr. and M. E. Pesut, to me  
personally known who acknowledged that they were the Vice Presi-  
dent and Secretary, respectively, of Hybrid Wheat, Inc., a  
corporation, and that they, as such officers, being authorized to  
do so, had executed the foregoing Assignment for the purposes  
therein contained, by signing the name of the corporation by them-  
selves as such officers.

WITNESS my hand and official seal this 15th day of March,  
1982.

Julie Cronauer  
Notary Public

My Commission Expires:

1-7-86



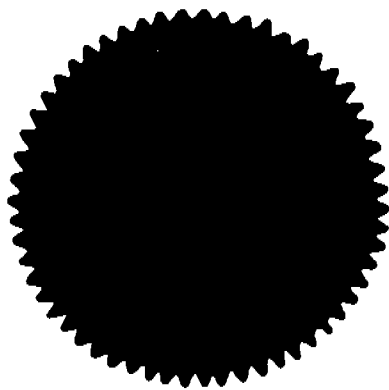


# State of DELAWARE

Office of SECRETARY OF STATE

*I, Glenn C. Kenton Secretary of State of the State of Delaware,  
do hereby certify* that the "MONSANTO FLAVOR/ESSENCE, INC.", filed a Certificate  
of Amendment, changing its corporate title to "Hybritech Seed International,  
Inc.", on the twenty-ninth day of June, A.D. 1982, at 10 o'clock A.M.

In Testimony Whereof, *I have hereunto set my hand  
and official seal at Dover this* twenty-ninth *day*  
*of* June *in the year of our Lord*  
*one thousand nine hundred and* eighty-two.



*Glenn C. Kenton*

Glenn C. Kenton, Secretary of State

## ASSIGNMENT

KNOW ALL MEN BY THESE PRESENTS, that DEKALB AgResearch, Inc., a Delaware corporation ("Grantor"), for good and valuable consideration, the adequacy and receipt of which is hereby acknowledged, does hereby assign, transfer, convey and deliver to Hybrid Wheat, Inc., a Delaware corporation, its successors and assigns, all of the rights, obligations, privileges and benefits which Grantor may have under the Plant Variety Protection Act as evidenced by those Certificates of Plant Variety Protection attached hereto, the particulars of which are as follows:

<u>PRODUCT</u>	<u>VARIETY NAME</u>	<u>DATE FILED</u>
Wheat	Bonanza	February 2, 1971
Agrotricum	290M	August 30, 1971
Wheat (hard red winter)	R36	January 29, 1973
Wheat	DEKALB 582M	December 17, 1973
Wheat	DEKALB 581M	December 17, 1972
Wheat	R158	April 28, 1976

Dated this 7<sup>th</sup> day of January 1982.

GRANTOR: DEKALB AgResearch, Inc.

By: James L. Herbert, Jr.  
James L. Herbert, Jr.,  
Vice President

ATTEST:

Arvo J. Riippi  
ASSISTANT SECRETARY

STATE OF ILLINOIS )  
 ) SS  
COUNTY OF DE KALB )

On the 7<sup>th</sup> day of January 1982, before me Denise J. McCabe, A Notary Public in and for said County personally appeared James L. Herbert, Jr., and Doris J. Riippi to me personally known who acknowledged that they were the Vice President and Assistant Secretary, respectfully, of DEKALB AgResearch, Inc., a corporation, and that they, as such officers, being authorized to do so, had executed the foregoing Assignment for the purposes therein contained, by signing the name of the corporation by themselves as such officers.

WITNESS my hand and official seal this 7<sup>th</sup> day  
of January, 1982.

Denise J. McCabe  
Notary Public

My Commission Expires:

October 19, 1983

OBJECTIVE DESCRIPTION OF VARIETY  
WHEAT (TRITICUM SPP.)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

DeKalb AgResearch, Inc.

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)

Sycamore Road

DeKalb, Illinois 60115

## FOR OFFICIAL USE ONLY

PVPO NUMBER

7123

VARIETY NAME OR TEMPORARY  
DESIGNATION

Bonanza

Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in first box (e.g. 0 8 9 or 0 9 ) when number is either 99 or less or 9 or less.

## 1. KIND:

 1 = COMMON    2 = DURUM    3 = EMMER    4 = SPELT    5 = POLISH    6 = POULARD    7 = CLUB

## 2. TYPE:

 1 = SPRING    2 = WINTER    3 = OTHER (Specify) \_\_\_\_\_  1 = SOFT    3 = OTHER (Specify) \_\_\_\_\_  
2 = HARD 1 = WHITE    2 = RED    3 = OTHER (Specify) \_\_\_\_\_

## 3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:

   FIRST FLOWERING   LAST FLOWERING

## 4. MATURITY (50% Flowering):

  NO. OF DAYS EARLIER THAN .....  1 = ARTHUR    2 = SCOUT    3 = CHRIS  NO. OF DAYS LATER THAN .....  4 = LEMHI    5 = NUGAINES    6 = LEEDS

## 5. PLANT HEIGHT (From soil level to top of head):

   CM. HIGH  CM. TALLER THAN .....  1 = ARTHUR    2 = SCOUT    3 = CHRIS  CM. SHORTER THAN .....  4 = LEMHI    5 = NUGAINES    6 = LEEDS

## 6. PLANT COLOR AT BOOTING (See reverse):

 1 = YELLOW GREEN    2 = GREEN    3 = BLUE GREEN

## 7. ANTHUR COLOR:

 1 = YELLOW    2 = PURPLE

## 8. STEM:

 Anthocyanin: 1 = ABSENT    2 = PRESENT Waxy bloom: 1 = ABSENT    2 = PRESENT Hairiness of last internode of rachis: 1 = ABSENT    2 = PRESENT Internodes: 1 = HOLLOW    2 = SOLID  NO. OF NODES (Originating from node above ground)  CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

## 9. AURICLES:

 Anthocyanin: 1 = ABSENT    2 = PRESENT Hairiness: 1 = ABSENT    2 = PRESENT

## 10. LEAF:

 Flag leaf at booting stage: 1 = ERECT    2 = RECURVED  
3 = OTHER (Specify) \_\_\_\_\_ Flag leaf: 1 = NOT TWISTED    2 = TWISTED Hairs of first leaf sheath: 1 = ABSENT    2 = PRESENT Waxy bloom of flag leaf sheath: 1 = ABSENT    2 = PRESENT MM. LEAF WIDTH (First leaf below flag leaf) CM. LEAF LENGTH (First leaf below flag leaf)

## 11. HEAD:

<input type="checkbox"/> 2	Density: 1 = LAX 2 = DENSE	<input type="checkbox"/> 4	Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE 4 = OTHER (Specify) <b>oblong *</b>
<input type="checkbox"/> 4	Awedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED		
<input type="checkbox"/> 1	Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED 5 = BROWN 6 = BLACK 7 = OTHER (Specify):		
<input type="checkbox"/> 0 <input type="checkbox"/> 8	CM. LENGTH	<input type="checkbox"/> 1 <input type="checkbox"/> 0	MM. WIDTH

## 12. GLUMES AT MATURITY:

<input type="checkbox"/> 2	Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.) 3 = LONG (CA. 9 mm.)	<input type="checkbox"/> 2	Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.) 3 = WIDE (CA. 4 mm.)
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<input type="checkbox"/> 2-3	Shoulder shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED 4 = SQUARE 5 = ELEVATED 6 = APICULATE	<input type="checkbox"/> 3	Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE
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## 13. COLEOPTILE COLOR:

<input type="checkbox"/> 1	1 = WHITE 2 = RED 3 = PURPLE
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## 14. SEEDLING ANTHOCYANIN:

<input type="checkbox"/> 1	1 = ABSENT 2 = PRESENT
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## 15. JUVENILE PLANT GROWTH HABIT:

<input type="checkbox"/> 2	1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT
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## 16. SEED:

<input type="checkbox"/> 1	Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL	<input type="checkbox"/> 1	Cheek: 1 = ROUNDED 2 = ANGULAR
<input type="checkbox"/> 2	Brush: 1 = SHORT 2 = MEDIUM 3 = LONG	<input type="checkbox"/> 1	Brush: 1 = NOT COLLARED 2 = COLLARED
<input type="checkbox"/> 5*	Phenol reaction (See instructions): 1 = IVORY 2 = FAWN 3 = LT. BROWN 4 = BROWN 5 = BLACK	<input type="checkbox"/> 2	Embryo size: 1 = SMALL (Lemhi) 2 = MEDIUM (Scout) 3 = LARGE (Arthur)
<input type="checkbox"/> 3	Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify)		
<input type="checkbox"/> 0 <input type="checkbox"/> 6	MM. LENGTH	<input type="checkbox"/> 0 <input type="checkbox"/> 2	MM. WIDTH
		<input type="checkbox"/> 3 <input type="checkbox"/> 1	GM. PER 100 SEEDS

## 17. SEED CREASE:

<input type="checkbox"/> 1*	Width: 1 = 60% OR LESS OF KERNEL 'WINOKA' 2 = 80% OR LESS OF KERNEL 'CHRIS' 3 = NEARLY AS WIDE AS KERNEL 'LEMHI'	<input type="checkbox"/> 2*	Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT' 2 = 35% OR LESS OF KERNEL 'CHRIS' 3 = 50% OR LESS OF KERNEL 'LEMHI'
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## 18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

<input type="checkbox"/> 2	STEM RUST (Races) <b>15B2 *</b>	<input type="checkbox"/> 2	LEAF RUST (Races) <b>15</b>	<input type="checkbox"/> 2	STRIPE RUST (Races) <b>unknown</b>	<input type="checkbox"/> 2	LOOSE SMUT
<input type="checkbox"/> 0	POWDERY MILDEW	<input type="checkbox"/> 0	BUNT	<input type="checkbox"/> 1	OTHER (Specify) <b>Septoria avenia tritici</b>		

## 19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

<input type="checkbox"/> 1	SAWFLY	<input type="checkbox"/> 0	APHID (Bydv.)	<input type="checkbox"/> 0	GREEN BUG	<input type="checkbox"/> 0	CEREAL LEAF BEETLE
<input type="checkbox"/>	OTHER (Specify) _____			<input type="checkbox"/> 0	GP	<input type="checkbox"/> 0	A
				<input type="checkbox"/> 0	B	<input type="checkbox"/> 0	C
				<input type="checkbox"/> 0	D	<input type="checkbox"/> 0	E
				<input type="checkbox"/> 0	F	<input type="checkbox"/> 0	G

## 20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	<b>Chapparel/Bounty 208</b>	Seed size	<b>Chapparel/Bounty 208</b>
Leaf size	<b>Chapparel/Bounty 208</b>	Seed shape	<b>Chapparel/Bounty 208</b>
Leaf color	<b>Chapparel/Bounty 208</b>	Coleoptile elongation	<b>Chapparel/Bounty 208</b>
Leaf carriage	<b>Chapparel/Bounty 208</b>	Seedling pigmentation	<b>Chapparel/Bounty 208</b>

## INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

- (a) L.W. Briggie and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.
- (b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

LEAF COLOR: Nickerson's or any recognized color fan should be used to determine the leaf color of the described variety.